



Biodiversity Net Gain Assessment

Former Nursery Buildings, Earl Street, Prestwich, Greater Manchester, M25 1FX

Dream Homes Construction

Status	Issue	Name	Date
Draft	1	Jonathan Stuttard, Senior Consultant BSc (hons) MSc	08/08/2022
Final	1.1	Jonathan Stuttard, Senior Consultant BSc (hons) MSc	08/08/2022

Arbtech Consultant's Contact Details:

Jonathan Stuttard
Senior Ecologist
Tel: 07842313164 Email: jonathanstuttard@arbtech.co.uk
Arbtech Consulting Ltd
<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Industry Guidelines and Standards

This report has been written with due consideration to:

- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management, Construction Industry Research and Information Association & Institute of Environmental Management and Assessment (2019). Biodiversity Net Gain – Good Practice Principles for Development.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Ltd. was instructed by Dream Homes Construction to undertake a Biodiversity Net Gain (BNG) Part 1 Assessment to determine the baseline biodiversity unit score for a development at Former Nursery Buildings, Earl Street, Prestwich, Greater Manchester, M25 1FX (hereafter referred to as “the site”). The assessment was required to inform a planning application (Bury Council ref: 66674) for the Change of use of former nursery buildings to form 4 no.dwellings and demolition of existing garage units to create 13.no dwellings with associated external works (hereafter referred to as “the proposed development”).

The baseline biodiversity unit value of the site is **3.14 habitat units**. As such, in order to achieve the minimum target of a 10% gain in biodiversity as a result of the proposed development, the post-development biodiversity unit score will need to be greater than or equal to 3.454 habitat units.

It is recommended that a detailed landscaping scheme is designed for the site targeting areas within the public realm for ecological enhancement. Once landscaping plans have been finalised, a BNG Part 2 assessment can be undertaken to determine the biodiversity unit score post-development and subsequently confirm the change in biodiversity value of the site. Should the minimum 10% net gain in biodiversity not be achieved, recommendations for alterations to the proposed scheme can be made to help achieve the required 10% gain.

Contents

1.0 Introduction and Context..... 6

 1.1 Site Context 6

 1.2 BNG Informative 6

2.0 Methodology..... 7

 2.1 Baseline Biodiversity Value..... 7

3.0 Results and Evaluation 8

 3.1 Baseline Habitats 8

 3.3 Baseline Biodiversity Value of the Site 9

4.0 Conclusions and Recommendations 10

5.0 Bibliography 11

 Appendix 1: Proposed Development Plans 12

 Appendix 2: Site Location Plan 13

 Appendix 3: Habitat Survey Plan 14

1.0 Introduction and Context

Arbtech Consulting Ltd. was instructed by Dream Homes Construction to undertake a Biodiversity Net Gain (BNG) Part 1 Assessment to determine the baseline biodiversity unit score for a development at Former Nursery Buildings, Earl Street, Prestwich, Greater Manchester, M25 1FX (hereafter referred to as “the site”). The assessment was required to inform a planning application (Bury Council ref: 66674) for the Change of use of former nursery buildings to form 4 no.dwellings and demolition of existing garage units to create 13.no dwellings with associated external works (hereafter referred to as “the proposed development”). A proposed development plan is provided in **Appendix 1**.

This report should be read in conjunction with the following documents:

- The Defra Biodiversity Metric 3.1 pertaining to the site (Arbtech Consulting Ltd. 2022); and
- The Preliminary Ecological Appraisal and Preliminary Roost Assessment pertaining to the site (Dunelm Ecology 2021).

1.1 Site Context

The site is located at National Grid Reference SD 82290 03771 and has an area of 0.45ha. The site is characterised by a disused nursery and adjacent derelict land and infrastructure. Habitats recorded on site include buildings, hardstanding, bare ground, dense scrub, tall ruderal vegetation, scattered trees, semi-natural broadleaved woodland, introduced shrubs, wall, and fence. The site is enclosed by railway lines and associated rail side vegetation to the north, and residential development to the east, south and west. A site location plan is provided in **Appendix 2**.

1.2 BNG Informative

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline condition. In order to achieve BNG, a project must be able to demonstrate that it has followed all 10 of the Principles of Biodiversity Net Gain.

The recently legalised Environment Act (2021) requires developments in England to demonstrate a measurable net gain in biodiversity and sets a target of a minimum of 10% BNG for all developments. It also stipulates that a management plan with a minimum 30-year term should be adopted to ensure biodiversity net gain can be delivered. The Environment Act (2021) is still in a transitional phase and is not expected to become mandatory until 2023. However, the requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF).

The DEFRA Biodiversity Metric 3.1 is the widely accepted tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development in order to determine the overall change in biodiversity value as a result of the proposed development. The Biodiversity Metric has separate BNG assessments for areas of habitat, hedgerows, and watercourses.

The biodiversity value of a site should be maximised. However, it may not always be possible to achieve a 10% biodiversity net gain within a site and therefore the Biodiversity Metric 3.1 can also account for offsite habitat creation, where land is available. Alternatively, developers can seek to provide an agreed financial contribution to an appropriate third party (such as the Local Authority, the UK Government or another landowner) to deliver the required biodiversity net gain elsewhere on their behalf.

2.0 Methodology

2.1 BNG Part 1 - Baseline Biodiversity Unit Value

The baseline BNG Calculation was informed by the PEA and PRA pertaining to the site (Dunelm Ecology 2021); the baseline habitat plan is provided in **Appendix 3**.

Habitat Classification

The PEA and PRA classified the habitats on site according to the methodology set out in Phase 1 Habitat Survey Methodology (JNCC, 2010). For purposes of this BNG Calculation, identified habitats were translated to their equivalents in the UK Habitat Classification. This was achieved using a combination of The UK Habitat Classification Habitat Definitions Version 1.0 (The UK Habitat Classification Working Group, May 2018) and the G-9 Translation Phase 1 Tab included in the Biodiversity Metric 3.1 spreadsheet.

Habitat Area/Length

The area or length of each habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of a similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or lost (i.e. destroyed by proposed development).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Biodiversity Metric 3.1 Technical Supplement (Panks et al., 2022). The habitat condition assessments were based on the information provided within the PEA and PRA report, including the habitat descriptions, species lists, and site photographs.

Strategic Significance

Strategic significance was assigned for each habitat based upon a review of the following:

- Ecological value (based on the PEA and PRA);
- Function within the landscape (based on a review of Google and OS imagery); and
- Any site or habitat allocations under the relevant Local Planning Policy and Biodiversity Action Plan.

3.0 Results and Evaluation

3.1 Baseline Habitats

Table 1 details the baseline habitats present within the site along with their area/length, condition, and strategic significance.

Table 1: Baseline Biodiversity Value

Habitat	Area (ha) or Length (km)	Description (Dunelm Ecology 2021)	Condition Assessment	Strategic Significance	Biodiversity Unit Score
Area Based Habitats					
JNCC Phase 1: Buildings and Hardstanding. UK Habs Equivalent: Urban: Developed Land; Sealed Surface.	0.164ha	Hardstanding is present in the form of macadam vehicle and pedestrian access.	Condition is predetermined as N/A in accordance with the Biodiversity Metric 3.1 Technical Supplement.	Habitat classification is not included within any local strategic strategy.	0.00
JNCC Phase 1: Bare ground UK Habs Equivalent: Urban: Vacant/ derelict lane/ bare ground	0.02ha	Bare ground is present in the form of exposed gravel.	The bare ground condition was assessed using the Urban Habitat Type Condition Sheet as detailed within Biodiversity Metric 3.1 Technical Supplement. The bare ground passes criteria 3 and fails criteria 1 & 2. The Bare ground is therefore assessed to be of poor condition.	Habitat classification is not included within any local strategic strategy.	0.04
JNCC Phase 1: Introduced shrubs UK Habs Equivalent: Urban: Introduced shrubs	0.008ha	A small discrete patch of Japanese knotweed exists on the eastern edge of the site and appears to have been treated with a herbicide. Variegated yellow archangel also occurs on the southern boundary of the site.	Condition is predetermined as N/A in accordance with the Biodiversity Metric 3.1 Technical Supplement.	Habitat classification is not included within any local strategic strategy.	0.02
JNCC Phase 1: Poor semi-improved grassland UK Habs Equivalent: Grassland: Other neutral grassland	0.045ha	Several discrete areas of grassland exist within the site, one area appearing to have once been a child play area. The grassland is tall and tussocky comprising a limited number of herbs indicative of nutrient rich grassland. Grass species include dominant rough meadow grass with red fescue, bent spp., perennial rye, tufted hair grass and Yorkshire fog. Herbs are restricted to common dock, broadleaved plantain, creeping buttercup, dandelion and willowherb spp.	Grassland condition was assessed using the grassland medium, high, and very high distinctiveness Condition Sheet as detailed within Biodiversity Metric 3.1 Technical Supplement. The grassland passes criteria 2, 3, 4, and 5 and fails criteria 1 and 6. The grassland is therefore anticipated to be of moderate condition.	Habitat classification is not included within any local strategy but is considered ecologically desirable.	0.40

JNCC Phase 1: Dense scrub and tall ruderal vegetation UK Habs Equivalent: Heathland and shrub; Mixed scrub	0.182ha	The central areas of the site are dominated by dense bramble scrub (with sycamore saplings) intermixed with tall ruderal species. Scattered bramble and goat willow scrub exist on the eastern edges of the site.	Mixed scrub condition was assessed using the Scrub Habitat Types Condition Sheet as detailed within Biodiversity Metric 3.1 Technical Supplement. The mixed scrub passes criteria 3 and fails criteria 1, 2, 4, & 5. The mixed scrub is therefore assessed to be of poor condition.	Habitat classification is not included within any local strategy but is considered ecologically desirable.	0.80
JNCC Phase 1: Semi-natural broadleaved woodland UK Habs Equivalent: Woodland and forest: Other woodland; deciduous	0.031ha	Secondary semi-natural woodland occurs in the north east corner of the site and forms an extension to woodland along the tramline cuttings. The woodland comprises a mixture of semi-mature and mature specimens including ash, goat willow, cherry spp., with holly, dog rose, wood avens, herb Robert and fern spp in the understorey and ground layer.	Woodland condition was assessed using the Woodland Condition Sheet as detailed within Biodiversity Metric 3.1 Technical Supplement. The woodland scored for each criterion as follows: C1 - 3, C2 - 2, C3 - 3, C4 - 3, C5 - 3, C6 - 2, C7 - 2, C8 - 2, C9 - 2, C10 - 2, C11 - 2, C12 - 1, C13 - 1. The sum of the criterion scores is: 28. The woodland is therefore assessed to be of moderate condition.	Habitat classification is not included within any local strategy but is considered ecologically desirable.	0.27
JNCC Phase 1: Scattered trees UK Habs Equivalent: Urban: Urban trees	0.183ha (5 medium trees)	Several semi-mature/mature beech and sycamore trees occur along the southern site boundary.	Urban tree conditions were assessed using the Urban Tree Condition Sheet as detailed within Biodiversity Metric 3.1 Technical Supplement. The trees pass criteria 4 & 6 and fail criteria 1, 2, 3, & 5. The Urban Trees are therefore assessed to be of poor condition.	Habitat classification is not included within any local strategy but is considered ecologically desirable.	1.61

3.3 Baseline Biodiversity Value of the Site

Full details are provided in the Biodiversity Metric 3.1. The headline results as described below and are shown on **Figure 1**.

- The baseline biodiversity unit score: **Habitat Units:** 3.14 units; **Hedgerow Units:** n/a

On-site baseline	<i>Habitat units</i>	3.14
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00

Figure 1: A screenshot of the Biodiversity Metric 3.1 baseline result.

4.0 Conclusions and Recommendations

The baseline biodiversity unit value of the site is **3.14 habitat units**. As such, in order to achieve the minimum target of a 10% gain in biodiversity as a result of the proposed development, the post-development biodiversity unit score will need to be greater than or equal to 3.454 habitat units.

There is scope to achieve a net gain in biodiversity as a result of the proposed development. The proposed development includes areas of soft landscaping that can be enhanced for ecology. However, it is important to note that although private vegetated gardens are of value to ecology and will contribute to the post-development biodiversity unit score, the future management of private residential gardens to benefit wildlife cannot be secured and their ecological value is subsequently limited within the Biodiversity Metric 3.1. It is therefore recommended that areas within the public realm are targeted for ecological enhancement to ensure a 10% gain in biodiversity is achieved post-development. Although small in extent, there is potential for new landscaping to be installed in these areas that represent a high ecological value through the provision of new landscaping such as the creation of wildflower grassland, new ponds, native shrub planting, and native tree planting.

It is recommended that a detailed landscaping scheme is designed for the site targeting areas within the public realm for ecological enhancement. Once landscaping plans have been finalised, a BNG Part 2 assessment can be undertaken to determine the biodiversity unit score post-development and subsequently confirm the change in biodiversity value of the site. Should the minimum 10% net gain in biodiversity not be achieved, recommendations for alterations to the proposed scheme can be made to help achieve the required 10% gain.

5.0 Bibliography

- Arbtech Consulting Ltd. (2022). Defra Biodiversity Metric 3.1. Former Nursery Buildings, M25 1FX.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- CIEEM-CIRIA-IEMA (2019) Biodiversity Net Gain – Good Practice Principles for Development.
- Dunelm Ecology. (2021). Preliminary Ecological Appraisal. Former Nursery Buildings, M25 1FX.
- Google Earth (2022) accessed on 08/08/2022.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit.
http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Magic database (2022) accessed on 08/08/2022.
- Panks, S.A., White, N., Newsome, A., Nash, M., Potter, J., Heydon, M., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. & Stone, D. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.
- Panks, S.A., White, N., Newsome, A., Nash, M., Potter, J., Heydon, M., Alvarez, M., Russell, T., Cashon, C., Goddard, F., Scott, S.J., Heaver, M., Scott, S.H., Treweek, J., Butcher, B. & Stone, D. (2022). Biodiversity metric 3.1: Auditing and accounting for biodiversity – Technical Supplement. Natural England.
- The Biodiversity Metric 3.1. (JP039: April 2022). <http://publications.naturalengland.org.uk/publication/6049804846366720>
- UK Habitat Classification Working Group. (2018). UK Habitat Classification – Habitat Definitions V1.0 <http://ecountability.co.uk/ukhabworkinggroup-ukhab/>

Appendix 1: Proposed Development Plans



Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan (Dunelm Ecology 2021)

